

On the whole, the system is amazing! Perhaps the hardest part of using the new Viking 3D system is getting used to looking “through the screen” rather than at it. But once that mental adjustment is made, the addition of depth perception to traditional laparoscopy opens the potential for a whole new string of procedural advances. On the downside, the camera head is a bit heavier than a traditional camera and repetitive rapid movements of the scope tend to be visually bothersome. Also, it would have been nice to have more interchangeability between the Viking system and other manufacturers’ systems, but it is the others who are lagging so it probably is not fair to blame the leader for its followers.

Design/Functionality Score: 4

## Innovation

Having used the old-style 3D helmet and conventional consumer-store, battery-powered 3D glasses, I think this newer iteration seems like a huge leap. In addition, the combination of 3D with true 1080p HD is tremendous. This is a game changer.

Innovation Score: 5

## Value

For me, separating cost and value is always hard. At \$125,000 for a complete setup, the Viking 3DHD Vision System is not cheap, especially when one adds in the extra cameras and scopes that will be needed to be truly operational. Then again, neither is a brand new Storz OR1 2D system and both are peanuts compared with a daVinci robot. In fairness to Intuitive Surgical, this is only a visualization system and does not offer the articulation, fine calibration, and multiple arms of the robot, but if it is only the 3D and the 1080p you want, this is a super value.

Value Score: 4

## Summary

The Viking 3DHD Vision System is one of the most exciting new products I have had an opportunity to try. The visualization is stunning. How this new 3D technology will change minimally invasive surgery is still unclear to me, but I am pretty sure we will all be 3D pretty soon. Rather than persevere on anticipating this new technology’s advantages, perhaps we should be asking ourselves why we would prefer to operate in 2D when 3D is here now. Hmmm?

Overall Score: 4.5



Viking 3D Vision System (Viking Systems, Inc., Westborough, MA). Photo courtesy of Viking Systems Inc.

**Product:** D-H. E. L. P.®  
**Company:** New Wave Surgical Corporation (Coral Springs, FL)  
**Retail Cost:** \$49.95 each (\$499 per box of 10)

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**Design/Functionality: 5**

**Innovation: 4.5**

**Value: 4**

**Overall Score: 5**

## Background

When it comes to laparoscopic surgery, I firmly believe that a crisp, clear, 1080p high-resolution image is good and a yucky, smudged-out one is bad. As such, I am forever miffed when the picture I get from my \$1.5 million robot is more akin to looking through the bathroom window of a 1965-era Texaco service station than anything resembling a high-tech surgical tool. Of course, picture quality is rarely the fault of the robot or the laparoscope but rather a function of fogging and schmutzing. To combat these perils, New Wave Surgical now offers the D-H. E. L. P.®—Defogging Heated Endoscopic Lens Protector System.

## Design/Functionality

D-H. E. L. P. is a single-use, disposable device designed to eliminate fogging and wash fats, blood, and other debris from laparoscopes during a procedure. Its battery-powered heating element will warm the antifogging fluid for up to 5 hours. The device is compact and designed to adhere to surgical drapes if needed. To function, the device is simply activated 5 minutes prior to the case and, voilà, no more endoscopic Rorschach tests. In addition, each D-H. E. L. P. comes packaged with a TrocarWipe® and a MicroPad® so that even debris within the trocar sleeves can be removed if needed.

In testing, D-H. E. L. P. could not have worked better. Prior to a few robotic procedures, the scopes were placed in the D-H. E. L. P. while the cases were getting started and, like magic, the scopes never needed to be taken out to be cleaned for the duration of the cases. Be still my heart. Goodbye, metal canister filled with warm water; goodbye, expensive mechanical scope warmers; Goodbye, FRED. Hello, D-H. E. L. P.

Design/Functionality Score: 5

## Innovation

Wherever the guys from New Wave Surgical went to school they got learned good. D-H. E. L. P. is a really clever and innovative product. While the rest of the world was focused on either warming or cleansing fluid application, New Wave Surgical went after a solution for both and succeeded. The D-H. E. L. P. is lightweight, compact, and unencumbered by tubing or wires. Finally, it is completely straightforward to use and almost impossible to misuse.

Innovation Score: 4.5

## Value

As a general rule, I am somewhat biased against single-use devices. The cost of a single-use device never goes down with amortization and, as a “green” guy, I bristle at creating more medical waste landfill. But value is not

based on cost alone. With particular respect to robotic procedures, where removing the laparoscope and camera is somewhat cumbersome and interrupts the flow of the operation, having a consistently clear picture can be worth a lot. 1080p is only helpful if the scope is not fogged or caked with blood and fat. This product works so well that its added functionality is worth the cost.

Value Score: 4

## Summary

Laparoscopic/robotic surgery can be difficult for a variety of reasons. Early in my career I was taught to address the problems I can control to maximize my focus on the challenges I cannot control—such as a patient’s anatomy and pathology. Adequate lighting, proper port placement, and good patient positioning can make a huge difference in a procedure’s progress and outcome. Add to this list a consistently high-quality picture and a minimum of scope removals and one can see where a device like D-H. E. L. P. can have a big impact. For complex operations, D-H. E. L. P. is an eye opener and certainly worth a try.

Overall Score: 5



D-H. E. L. P.® (New Wave Surgical Corporation, Coral Springs, FL). Photo courtesy of New Wave Surgical Corporation.

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*Dr. Greenberg reports no personal financial relationships with any of the companies whose products he reviews in this column.*

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